



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/975,293

10/11/2001

Max M. Yeung

01-3221496.00144

1284

24319

7590

04/27/2006

LSI LOGIC CORPORATION

1621 BARBER LANE

MS: D-106

MILPITAS, CA 95035

EXAMINER

TORRES, JOSEPH D

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/975,293

Applicant(s)

YEUNG ET AL.

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6-21 is/are allowed.
- 6) ☒ Claim(s) 22,23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Response to Arguments***

1. Applicant's arguments filed 02/02/2006 have been fully considered but they are not persuasive.

The Applicant contends, "Since "one of ordinary skill in the art at the time the invention was made would have known that syndromes are equal to the difference between received parity and newly generated parity at the receiver" (see Examiner's admission in last five lines on page 2 of the final Office Action dated November 30, 2005) and (i) the circuit shown in FIG. 7 of Stiffler receives only data bits (i.e., the signals bl...b16) and (ii) the signals [cl...c4] are computed parity relationships rather than a syndrome signal, it follows that one of ordinary skill in the art at the time the invention was made would not view FIG. 7 of Stiffler as teaching or suggesting a syndrome encoder circuit configured to (i) receive a read data signal AND a read parity-signal and (ii) generate a syndrome signal in response to the read data signal AND the read parity signal".

The Examiner disagrees and asserts that col. 8, lines 38-46 in Cassidy teaches that each of the parity nibbles such as c1-c4 are used to generate syndromes and that is why Cassidy labels circuit 430 in Figure 4 as the 1<sup>st</sup> Stage Syndrome Generator in recognition that circuit 430 generates syndrome signals necessary for the calculation of syndromes. The Examiner includes a teaching reference (Stephen B. Wicker, Error Control for Digital Communication and Storage,

Art Unit: 2133

Prentice-Hall 1995, pages 99-121) and refers the Applicant to page 117 for a teaching on the relationship between parity and syndromes. In particular, Wicker teaches that parity are syndrome signals (a signal that has the express purpose of generating syndromes) used for generating a syndrome.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hidaka; Hideto et al. (US 4730320 A, hereafter referred to as Hidaka) in view of Chen; Chin L. (US 4464753 A) in further view of Stiffler; Jack J. (US 4736376 A). See the Non-Final Action filed 04/29/2005 for detailed action of prior rejections.

Art Unit: 2133

3. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hidaka; Hideto et al. (US 4730320 A, hereafter referred to as Hidaka), Chen; Chin L. (US 4464753 A) and Stiffler; Jack J. (US 4736376 A).

See the Non-Final Action filed 04/29/2005 for detailed action of prior rejections.

***Allowable Subject Matter***

4. Claims 1-4 and 6-21 are allowed.

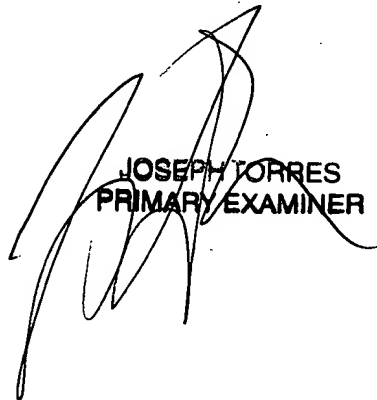
***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2133

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JOSEPH TORRES  
PRIMARY EXAMINER

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit 2133